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Class 1-15 23-25
Class 29/35
KUT 4/24/12

CLAIMS

A method of manufacturing a component of a droplet deposition apparatus, the component comprising a body of piezoelectric material having a plurality of channels each with a channel surface and a base, the body being attached to a surface of the base which is free of substantial discontinuities; the method comprising the steps of attaching the body to said surface of the base; and depositing a layer of conductive material so as to extend continuously over at least one of said channel surfaces and said surface of the base to provide an electrode on each channel surface and a conductive track on said surface of the base which is integrally connected to the electrode.

2. A method according to Claim 1, comprising the further step of removing regions of the layer of conductive material to define electrodes for different channels which electrodes are electrically isolated one from another.
3. A method according to Claim 1 or Claim 2, comprising the further step of removing regions of the layer of conductive material to define conductive tracks which are electrically isolated one from another.
4. A method according to Claim 2 or Claim 3, wherein said regions of the layer of conductive material are removed through local vaporisation of conductive material.
5. A method according to Claim 4, wherein conductive material is vaporised through the use of a laser beam.

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6. A method according to any one of Claims 2 to 5, wherein a strip of conductive material is removed from a land on the body which is defined between neighbouring channels.
 7. A method according to Claim 1, wherein said layer is deposited in a pattern to define electrodes for different channels, which electrodes are electrically isolated one from another.
 8. A method according to Claim 1 or Claim 7, wherein said layer is deposited in a pattern defining a plurality of said conductive tracks which are electrically isolated one from another.
 9. A method according to Claim 7 or Claim 8, wherein patterning of the deposited conductive layer is achieved through the use of masking.
 10. A method according to any one of the preceding claims, wherein the body is attached to the base prior to formation of the channels in the body.
 11. A method according to Claim 10, wherein the channels are formed through removal of regions of the body.
 12. A method according to Claim 11, wherein the step of removing regions of the body serves to define discrete walls of piezoelectric material, separated one from each other.
 13. A method according to Claim 11 or Claim 12, wherein the step of removing regions of the body serves also to remove regions of the base.

14. A method according to any one of the preceding claims, wherein the body is chamfered adjacent the base so as provide regions of the deposited layer of conductive material which overlie the body and the base respectively and which meet at an obtuse angle.
15. A method according to any one of the preceding claims, wherein the body is attached to the base through adhesive, there being defined between the body and the base a fillet of said adhesive which serves as a key for the deposited layer of conductive material.
16. A component for a droplet deposition apparatus comprising a body of piezoelectric material formed with a plurality of channels each channel having a channel surface; and a separate base having a base surface free of substantial discontinuities; wherein the body is attached to said base surface and a layer of conductive material extends continuously over said channel surfaces of and said base surface, thereby defining an electrode on each channel surface and a conductive track connected thereto on the base surface.
17. A component according to Claim 16, wherein an integrated circuit is carried on the base, said conductive tracks serving to provide electrical interconnection between the electrodes and the integrated circuit.
18. A component according to Claim 16 or Claim 17, wherein the base surface is substantially planar.
19. A component according to any one of Claims 16 to 18, wherein the body abuts the base at an obtuse angle.

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20. A component according to any one of Claims 16 to 19, wherein the base is formed of a material selected from the group consisting of aluminium nitride, alumina, invar or glass.
21. A component according to any one of Claims 16 to 20, wherein the conductive material is selected from the group consisting of copper, nickel, gold and alloys thereof.
22. A component according to any one of Claims 16 to 21, wherein the conductive material is deposited through electroless plating.
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